

## Remarks

Claims 1-7 are pending in the application. Claims 1-7 are rejected. Claims 1 and 7 are amended. All rejections are respectfully traversed.

Claims 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention.

Claim 7 has been amended to overcome the 35 USC 112 rejection.

The invention claims a method for encoding transmitted signals so that phases for all received signals at a receiver are within ninety degrees of each other, see paragraphs [051], [053], [054], [055], [058], and [061].

This is done by selecting one of the channel impulse responses as a reference channel impulse response, and normalizing the measured phase according to a phase of the reference channel impulse response so that a normalized phase is in a quadrant phase sector ( $90^\circ$ ) of the reference phase.

Claims 1, 6, and 7 are rejected under 35 U.S.C 102(e) as being anticipated by Tanaka (U.S. Patent Application Publication No. 2003/0124995).

Tanaka does not disclose encoding transmit signals at a transmitter so that phases for all received signals at a receiver are within ninety degrees of each other as claimed.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Hottinen et al. (U.S. Patent No. 6,754,286).

Hottinen does not disclose encoding transmit signals at a transmitter so that when phases for all received signals at a receiver are within ninety degrees of each other as claimed.

At column 11, lines 51-55, Hottinen states:

Thus, as can be gathered from FIG. 7, the feedback information provided in the odd slots  $S_{odd}$  indicates a phase difference of  $0^\circ$  or  $180^\circ$ , and the feedback information provided in the even slots  $S_{even}$  indicates a phase difference of  $-90^\circ$  or  $+90^\circ$ .

There, Hottinen only discloses feedback information where phase differences are diametrically opposed to each other, e.g.,  $0^\circ$  or  $180^\circ$ , and  $-90^\circ$  or  $+90^\circ$ . That is, the phase difference in either case is separated by  $180^\circ$  and directly opposed.

Hottinen discloses nothing about adjusting phases of transmitted signals.

A combination of Tanaka and Hottinen does not disclose claimed encoding so that received signals are within ninety degrees of each other as claimed, that is, within the same quadrant.

It is believed that this application is now in condition for allowance. A notice to this effect is respectfully requested. Should further questions arise

concerning this application, the Examiner is invited to call Applicant's agent at the number listed below. Please charge any shortage in fees due in connection with the filing of this paper to Deposit Account 50-0749.

Respectfully submitted,  
Mitsubishi Electric Research Laboratories, Inc.

By

A handwritten signature in cursive script, reading "Clifton D. Mueller", is written over a horizontal line.

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